

Event-Driven Programming Techniques

This chapter addresses the more experienced GUI programmer and describes essential programming techniques. There are two ways to program in the dialog editor:

- Use the dialog editor's menu bar and toolbar to create new dialogs or dialog elements and use the attributes window to assign attribute values to them. The dialog editor will internally generate the corresponding Natural code.
- Open an event-handler section or an inline-subroutine section and specify Natural code explicitly. This code will be added to the code that is generated internally. You can also enter parameter data areas, global data areas and local data areas in the corresponding definition sections.

You can view the current dialog's generated and specified code by choosing "Object > List" in the dialog editor's menu bar.

If you want a hands-on demonstration of how to program with the dialog editor, refer to the SYSEX EVT library. This library contains sample dialogs demonstrating basic functionality. Before accessing the sample dialogs, read the README file. Then execute the MENU dialog.

Notes:

Code written in the dialog editor must be in structured mode.

If you want to execute a Natural application using dialogs, you must use a dialog to start this application.

The following topics are covered below:

- How To Open and Close Dialogs
- How To Edit a Dialog's Enhanced Source Code
- How Dialogs, Controls and Items Are Related Hierarchically
- How To Define Dialog Elements
- How To Manipulate Dialog Elements
- How To Create and Delete Dialog Elements Dynamically
- How To Enable and Disable Dialog Elements
- Defining and Using Context Menus
- Using the Clipboard and Drag and Drop
- System Variables
- Generated Variables
- Message Files and Variables as Sources of Attribute Values
- Triggering User-Defined Events
- Suppressing Events
- Menu Structures, Toolbars and the MDI
- Executing Standardized Procedures
- Linking Dialog Elements to Natural Variables
- Validating Input in a Dialog Element
- Storing and Retrieving Client Data for a Dialog Element
- Creating Dialog Elements on a Canvas Control
- Working with ActiveX Controls
- Working with Arrays of Dialog Elements
- Working with Control Boxes
- Working with Dialog Bar Controls
- Working with Error Events
- Working with a Group of Radio-Button Controls
- Working with List-Box Controls and Selection-Box Controls
- Working with Nested Controls

- Working with a Dynamic Information Line
- Working with a Status Bar
- Working with Status Bar Controls
- Working with Dynamic Information Line and Status Bar
- Adding a Maximize/Minimize/System Button
- Defining Color
- Adding Text in a Certain Font
- Adding Online Help
- Defining Mnemonic and Accelerator Keys
- Dynamic Data Exchange - DDE
- Object Linking and Embedding - OLE

For further information on Event-driven Programming see Introduction to Event-Driven Programming.
